

What is claimed is:

1. A method of depositing a layer comprising:
forming a first function region comprising a first organic compound on an
5 electrode during irradiating a light in a deposition chamber;
forming a mixed region comprising the first organic compound and a second
organic compound on the first function region during irradiating the light in the
deposition chamber; and
forming a second function region comprising the second organic compound on
10 the mixed region during irradiating the light in the deposition chamber.

2. A method of depositing a layer according to claim 1, wherein a direction of
irradiating the light is the same as a direction of evaporating of the first organic
compound and the second organic compound.

15 3. A method of depositing a layer according to claim 1, wherein an evaporation
source from which the first organic compound is evaporated is differ from a evaporation
source from which the second organic compound is evaporated.

20 4. A method of depositing a layer according to claim 1, wherein the first organic
compound is evaporated from a first evaporation source and the second organic
compound is evaporated from a second evaporation source.

25 5. A method of depositing a layer according to claim 4, wherein the first
evaporation source and the second evaporation source are each provided in plurality.

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6. A method of depositing a layer according to claim 4, wherein the first organic compound and the second organic compound are continuously deposited as continuously operating the first evaporation source and the second evaporation source.

5 7. A method of depositing a layer according to claim 4, wherein the mixed region is formed as simultaneously operating the first evaporation source and the second evaporation source.

8. A method of depositing a layer according to claim 1, wherein the light is
10 irradiated from a light source, the light source and the evaporation source are on a same plane.

9. A method of depositing a layer according to claim 1, wherein the light uses an ultraviolet ray.

15 10. A method of depositing a layer according to claim 1, wherein the light has a wavelength of 100 to 200 nm.

11. A method of depositing a layer according to claim 8, wherein the light source
20 is a low-pressure mercury lamp.

12. A deposition apparatus comprising:
- a load chamber;
- an alignment chamber;
25 a first deposition chamber for forming an organic compound layer on a first electrode, provided with a first evaporation source, a second evaporation source and a light source;
- a cleaning preliminary chamber;

a second deposition chamber for forming a second electrode; and
a sealing chamber;
wherein said first evaporation source comprises a first organic compound and
said second evaporation source comprises a second organic compound;
5 wherein a light from said light source is irradiated during depositing said first
organic compound or said second organic compound by vacuum evaporation.

13. A deposition apparatus according to claim 12, wherein the apparatus is
provided with a means that said first evaporation source and said second evaporation
10 source are continuously operated.

14. A deposition apparatus according to claim 12, wherein the apparatus is
provided with a means that said first evaporation source and said second evaporation
source are simultaneously operated.

15 15. A deposition apparatus according to claim 12, the apparatus is provided with
a means that said light source and said evaporation source are simultaneously operated.

16. A deposition apparatus according to claim 12, wherein a light irradiated from
20 said light source is an ultraviolet ray.

17. A deposition apparatus according to claim 12, wherein said light source is a
low-pressure mercury lamp.

25 18. A deposition apparatus according to claim 12, wherein a light irradiated from
said light source has a wavelength of 100 to 200 nm.

19. A method of depositing a layer comprising:

forming a first function region comprising a first organic compound evaporated from a first evaporation source over an electrode in a deposition chamber during irradiating light;

5 forming a mixed region comprising the first organic compound evaporated from the first evaporation source and a second organic compound evaporated from a second evaporation source on the first function region in the deposition chamber during irradiating light;

10 forming a second function region comprising the second organic compound evaporated from the second evaporation source but not from the first evaporation source on the mixed region in the deposition chamber during irradiating light.

20. A method of depositing a layer in a deposition apparatus, the deposition apparatus comprising:

15 a load chamber;

an alignment chamber;

a first deposition chamber for forming an organic compound layer on a first electrode, prepared with a first and a second evaporation sources and a light source;

20 a cleaning preliminary chamber;

a second deposition chamber for forming a second electrode;

a sealing chamber;

a first evaporation source comprising a first organic compound; and

a second evaporation source comprising a second organic compound;

the method comprising:

25 forming a first function region comprising the first organic compound evaporated from the first evaporation source over the first electrode in the first deposition chamber during irradiating light from the light source;

forming a mixed region comprising the first organic compound evaporated from the first evaporation source and the second organic compound evaporated from the

second evaporation source on the first function region in the first deposition chamber during irradiating light from the light source;

forming a second function region comprising the second organic compound evaporated from the second evaporation source but not from the first evaporation source

5 on the mixed region in the first deposition chamber during irradiating light from the light source.

21. A method of depositing a layer comprising the step of forming an organic compound layer over an electrode in a deposition chamber during irradiating a light from
10 a light source.

22. A deposition apparatus comprising:

a load chamber;

an alignment chamber;

15 a first deposition chamber for forming an organic compound layer on a first electrode, comprising a first evaporation source, a second evaporation source and a light source;

a cleaning preparatory chamber;

a second deposition chamber for forming a second electrode; and

20 a sealing chamber;

wherein a light from said light source is irradiated during depositing an organic compound layer by vacuum evaporation.

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